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MABLETHORPE & SUTTON
URBAN DISTRICT



ANNUAL REPORT
of the
Medical Officer of Health
1951


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TO THE CHAIRMAN AND COUNCILLORS
MABLETHORPE AND SUTTON URBAN DISTRICT COUNCIL

I have pleasure presenting my Annual Report, for the year 1951 which is prepared in accordance with Statutory requirements.

Unfortunately, nearly all matters affecting the vital statistics were below the usual local standards and compared unfavourably by relation to the country as a whole. The greatest debit in post war years was shown in the birth-death ratio by the deaths exceeding the births by 11. As can be imagined, the local birth rate was lower than that for England and Wales, even when the actual figure was corrected by the comparability factor to make allowance for the different age-sex constitution of the local population. The actual death rate so corrected was less than the national figure, but both the still birth and the infant death rates exceeded the national rates.

The total deaths exceeded the number of the previous year by 10 but an examination of the causes of death revealed no increase of note among the particular diseases, though the deaths in the age group 45/55 were higher than usual. The deaths after the age of 65 years represented 70% of the total which was the average for the previous five years for this grouping. Cancer and tuberculosis deaths were appreciably below the post war average.

The infectious disease table contained three diseases only, two of which—whooping cough and measles—are epidemic expectations when they have completed the cycle. The whooping cough outbreak had its peak in the last months of the year, and unfortunately a death resulted. The measles cases were mild and not widespread.

I regret to mention a rather marked decrease in the number of babies immunised against diphtheria, although there was an increase in the number of booster doses given to children at school entrance age. This provides a rather puzzling situation, though it matters not in practice whether the denial of treatment to babies was due to procrastination or refusal, so far as their risk of getting the disease was concerned, and parents living at this seaside resort should keep well in mind the serious added risks to which their children are exposed by the huge annual influx of city children.

After all this, it is almost with relief that one turns to matters under the direct control of the Council to find the services running satisfactorily, even if nothing spectacular claimed the headlines. The satisfaction at the completion

of the sewerage provisions at Trusthorpe was offset by the disappointment regarding the intended sewerage scheme at the North End, and by the vexacious delay in delivery of machinery for the electric pump distribution of the water. The optimism that the setbacks were but temporary encouraged the staff to keep the services going under difficult conditions. A start was made towards the investigation of private water supplies and the preliminary results indicated the need for this and the likely requirement of mains extensions at such urgency as will be revealed by the completion of the survey.

In a seaside resort so largely and intimately concerned with food and catering, the supervision and control of food in all its aspects require more than the ordinary attention. With his usual efficiency and enthusiasm, the Sanitary Inspector was always on the alert to have any faults or dangers eliminated and the results, so far as they could be measured by sample taking and the absence of any known cases of food poisoning, justified his efforts.

It is again my pleasure to record the valued help given by Mr. Long during the year. Not living in the district it is inevitable that I make frequent calls on his services but always with the confidence that the matter in question will be given his full and immediate attention. I wish also to add my thanks to him for supplying information from his department which is freely used in the relevant parts of this report.

I hope also that my concluding thanks to the Chairman and Members of the Public Health Committee will not seem commonplace by yearly repetition. I am fully conscious of their co-operation and assistance which help considerably to stimulate the day to day effort.

W. J. KERRIGAN,
Medical Officer of Health

Louth.

July, 1952.

Mablethorpe & Sutton Urban District

ANNUAL REPORT

on the

Health and Sanitary Conditions

for the year 1951

PUBLIC HEALTH OFFICERS.

Medical Officer of Health—

W. J. KERRIGAN, M.B., B.Ch., B.A.O., L.M., D.P.H.

Sanitary Inspector and Meat and Milk Inspector—

C. V. LONG, B.E.M., C.R.San.I.

Engineer and Surveyor—

E. JORDAN, M.I.M., & Cy.E., M.R.San.I., M.I.S.E.

SECTION A.

SOCIAL CONDITIONS AND GENERAL STATISTICS.

Area and Urban District, including 717 acres of						
Foreshore	...	...	...	..	...	7,193 acres
Registrar General's estimate mid year Home						
Population	...	...	...	...	...	5,262
Density per acre (excluding foreshore)					...	0.81
Number of inhabited houses					...	2,049
Rateable value of inhabited houses					...	£27,231
Total Rateable value at 31/12/51.					...	£41,562
Product of a penny rate at 31/12/51					...	£163 1s. 0d.

Vital Statistics.

(NOTE—Figures in brackets give corresponding rates for England and Wales.)

Births.

		<i>Total</i>	<i>Male</i>	<i>Female</i>
(a)	Live :			
	Legitimate	69	29	40
	Illegitimate	1	1	—
		—	—	—
		70	30	40
		—	—	—
(b)	Still :			
	Legitimate	4	2	2
	Illegitimate	—	—	—

Live Birth Rate per 1000 of estimated population ... 13.3

Standardised Birth Rate per 1000 of estimated population.

(Comparability factor 1.08) ... 14.4 (15.5)

Still Birth Rate per 1000 of estimated population ... 0.76 (0.36)

Deaths.

	<i>Total</i>	<i>Male</i>	<i>Female</i>
	81	37	44
Death Rate per 1000 of estimated population ... 15.4			
Standardised Death Rate per 1000 of estimated population.			
(comparability factor 0.76) ... 11.7 (12.5)			

Deaths of Infants :

(a) Under one year of age :

		<i>Male</i>	<i>Female</i>
Legitimate	...	—	3
Illegitimate	...	—	—

(b) Under four weeks of age — 2

Death Rate under the age of one year per 1000 Live Births

42.9 (29.6)

Causes of and ages at death (infants) :

Prematurity :	1 day
Pneumonia :	2 weeks
Whooping Cough :	8 months

Ages at Death.

Ages in Years	0/1	1/5	5/15	15/25	25/35	35/45	45/55	55/65	65/75	75+	Total
Deaths	3	1			1	4	8	7	24	33	81

Cancer Deaths.

Ages in Years	Under 40	40/45	45/50	50/55	55/60	60/65	65/70	70/75	75+	Total
		1		1	2	2		1	4	11

Cancer Sites.

Breast	...	...	..	4
Lung and Bronchus			...	2
Stomach	...	...	...	1
Ovary	...	...	...	1
Prostate	...	...	...	1
Large Bowel		...	...	1
Bladder	...	...	...	1

Total Causes of Death in the Area, 1951.

	Male	Female
1. Tuberculosis of Respiratory System	—	1
2. Whooping Cough	—	1
3. Cancer of the Stomach	1	—
4. Cancer of Lung and Bronchus ...	2	—
5. Cancer of Breast	—	4
6. Cancer of all other sites	3	1
7. Diabetes	—	1
8. Vascular Lesions of Nervous System	9	8
9. Corony Disease, Angina	3	1
10. Hypertension with Heart Disease ...	2	2
11. Other Heart Disease	4	12
12. Other circulatory disease	1	3
13. Influenza	—	1
14. Pneumonia	3	1
15. Bronchitis	3	—
16. Ulcer of Stomach and Duodenum ...	1	—
17. Hyperplasia of Prostate	1	—
18. Other defined and ill-defined diseases	2	8
19. All other accidents	2	—
	37	44
	—	—

SECTION B.

GENERAL PROVISION OF HEALTH SERVICES OF THE AREA.

Laboratory Facilities.

The Public Health Laboratory at Lincoln examined without cost to the Council 190 samples consisting of water, milk and ice cream. The only other samples submitted were two of water for chemical analysis which were done by the Council's analyst on a fee basis. The P.H. Laboratory also carries out any bacteriological examinations of specimens concerned with the investigation of infectious diseases, but fortunately none was required. It provides an excellent service and has the advantage that the bus service allows the samples to reach Lincoln about two hours after their dispatch.

Clinics.

The only clinic provided in the district is the Infant Welfare Centre at Mablethorpe which is maintained by the County Council. It is held each Thursday from 2 p.m. to 4 p.m. and the doctor in charge attends on the 1st and 3rd Thursdays of the month, during which days diphtheria immunisation for children under five years is also done.

The record of attendances at the Centre during the year, supplied through the courtesy of the County Medical Officer of Health, shows how well the services were availed of by the mothers in the district.

	<i>Mothers</i>	<i>Infants under 1 year</i>	<i>Children 1 to 5 years</i>
New Cases	63	60	10
Other Cases	392	20	236
Total Attendance	1563	938	968

Schools.

The pupils in particular age groups, special, and supervision cases are examined at twice yearly intervals at the County Schools—one each at Mablethorpe and Sutton—by the County Council's Medical Officer. The latter carries out the diphtheria prophylactic treatment, both primary and reinforcing, at the schools for those requiring it.

SECTION C.

SANITARY CIRCUMSTANCES IN THE AREA.

Water.

The public supply was subject to weekly bacteriological control checks by samples obtained direct from bores and from taps at various points in the district. The following shows the results of the bacteriological examinations.

Grades			
1.	2.	3.	4.
36	5	3	4

Of the grade 4 unsatisfactory reports, one gave a Coliform B. count of 13, two of 25 and one of 50 per 100 ml. Two of the samples were taken in August, one in September and one in October. No reason was found for these deviations which were concerned with samples taken from business premises, but it was significant that in the case of the worst report a sample taken on the same day direct from the bore proved to be sterile. Immediate follow up examinations from the supplies yielding the offending samples proved satisfactory.

There were two chemical analyses done during the year which were normal in content.

The delay in delivery of the machinery for installing the new electric pump caused another year of anxiety in the endeavour to meet water demands during the holiday season by the existing pumps working to capacity on twenty hour stretches. From this angle it was fortunate the wet season helped to lessen the demand for water for outside uses.

In my report of the previous year, I referred to some 87 houses situated at the outskirts of the district not on the public mains, the supplies of which had not previously been examined to ascertain their safety for domestic use. During the year, samples were taken from 39 of these with results showing 15 as unsafe, including 10, which owing to faecal pollution, were potentially dangerous. It was therefore not before time that this survey was undertaken and plans made for its completion as a matter of urgency. The private supplies were found of the usual type, satisfactory when the water was delivered direct from efficient deep bores, but as expected, inferior results came from the bore and well constructions. The menace of the latter is that the supply is taken for granted by the owners as satisfactory, when it has no abnormal discolouration, taste or smell. Some of these wells were opened following the adverse reports and the sanitary inspector remarked

about their appalling state, due to defects ranging from wall subsidence to open jointed brickwork which allowed the entry of every form of pollution from the immediate surroundings. As an aside, one can merely speculate to what extent the health of these households was affected at one time or another by using this untreated water, but there is no doubt whatsoever about the potential day-to-day risks to health which were incurred. It was decided to await the completion of the survey before making any organised effort to have the defective structures rectified, except in the worst cases, because of the possibility that an extension of the mains supply would require to be considered as an urgency for certain parts of the area.

Drainage and Sewerage.

One large sanitary blot was removed from the district when the sewerage scheme, started two years before at Trusthorpe, was finally completed. All but three properties on the line of the sewer had been linked up, which involved the abolition of 33 cesspools, the conversion of 11 pail closets and the reconstruction of the drains of 29 dwellings. An extension, to sewer a small number of houses in Eaton Road, Trusthorpe, was agreed by the Council and had reached the stage of tender. This when completed will result in the abolition of 5 other cesspools.

It would be a pleasing inclusion if one could report progress in the steps towards having eliminated that large remaining sanitary disgrace at the North End, but unfortunately, sanction for the proposed sewerage scheme to proceed was withheld. It is to be hoped that the setback to our endeavours will only be temporary. Meantime, the sanitary inspector required to arrange for twice weekly summer emptying of the cesspools in that district and having the contents discharged into isolated manholes so as to avoid creating a nuisance in the area.

The following gives an account of the routine work performed under these heads :-

Drains.

Drains examined, tested, exposed etc.	...	...	403
Drains unstopped, repaired etc.	...	...	68
Waste pipes, disconnected repaired etc.	...	...	4
Existing soil pipes etc. renewed or repaired	...	...	1

Cesspools.

Total number abolished	34
------------------------	-----	-----	-----	----

Four new cesspools and 3 septic tanks were substituted for 7 defective cesspools in unsewered parts of the area.

Closets.

Number of houses with privy vaults in districts	...	8
Number of houses with pail closets in district	..	100
Number of pail closets repaired	... ..	Nil
Number of water closets substituted for dry		
receptacies	....	12
Number of water closets repaired	....	31

House Refuse.

The efficient weekly service for collecting house refuse was maintained, and during the summer season, a bi-weekly collection operated for the benefit of shops, cafes, camps and where otherwise indicated. The new tip at the Brickyards was taken over and with an improvement of the surface entrance road and widening, the site should provide a splendid tipping area for many years to come.

Verminous Premises.

Disinfection.

Rooms disinfected :		
(a) ordinary infectious disease	....	1
(b) tuberculosis	.... ...	2
Rooms stripped and cleansed	... ..	Nil
Number of premises disinfected	... ..	3

Nuisances.

Total number of nuisances during the year :		
(1) Abated as result of informal action		
by Sanitary Inspector	... ..	370
(2) Reported to Council :		
(a) Statutory Notice issued	.. ...	2
(b) Statutory Notice not issued	... ..	5

Prevention of damage by Pests—1949 Act.

The Sanitary Inspector considered as the result of the organised campaign, the rat population has been materially reduced. The plan of the work proceeded as in the previous year by sectional surveys and treatments. The estimated kill for the year was 1420 rats following 148 treatments to Council properties, private houses and large block control work. The farm properties were surveyed and treated about the same time by the County A.E.C. Officer.

Shops Act, 1950.

Number of shops inspected	...	42
Contraventions remedied	... ..	Nil

Factories Acts, 1937 and 1948.

1. Inspections.

<i>Premises</i>	<i>No. on Register</i>	<i>Number of</i>		
		<i>Inspections</i>	<i>Written Notices</i>	<i>Prosecution</i>
1. Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by Local Authorities	11			
2. Factories not included in (1) in which section 7 is enforced by the Local Authority	24	48	5	—
3. Other premises in which section 7 is enforced by the Local Authority (excluding out-workers' premises)	1			
Total	36	48	5	—

2. Defects found.

<i>Particulars</i>	<i>Found</i>	<i>Remedied</i>	<i>Referred by H M. Inspector</i>
Want of cleanliness	4	4	—
Inadequate Ventilation	1	1	1
Total	5	5	1

SECTION D.

INSPECTION AND SUPERVISION OF HOUSES.

Total number of new houses erected during the year	...	17
(1) By the Local Authority	... ..	12
(2) By other Local Authorities	... ..	Nil
(3) By other bodies or persons	... ..	5

1. Inspection of Dwelling Houses during the year :—

(1) (a) Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts)	... ..	127
(b) Number of inspections made for the purpose	...	309
(2) Number of dwelling houses (included under Sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925	...	Nil
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	... ..	Nil
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation.	... ..	63

2. Remedy of defects during the year without service of Formal Notices :—

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers	61
-----------------------------------------------------------------------------------------------------------------------------	--------	----

3. Action under Statutory Powers during the year :—

(a) Proceedings under Sections 9, 10 and 36 of the Housing Act, 1936 :—		
(1) Number of dwelling-houses in respect of which notices were served requiring repairs	...	2
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—		
(a) By owners	... ..	Nil
(b) By Local Authority in default of owners	...	2
(b) Proceedings under Public Health Acts	... ..	Nil
(c) Proceedings under sections 11 and 13 of the Housing Act, 1936	... ..	Nil

(d) Proceedings under section 12 of the Housing Act, 1936	...	...	...	...	...	Nil
(e) Proceedings under sections 25 and 26 :—						
(1) Number of Clearance Orders made	...	...	...	...	...	Nil

4. Housing Act, 1936—Part IV. Overcrowding.

(a) (1) Number of dwellings overcrowded at the end of the year	...	...	...	...	...	1
(2) Number of families dwelling therein	...	...	...	...	...	1
(3) Number of persons dwelling therein	...	...	...	...	...	7
(b) Number of new cases of overcrowding reported during the year	...	...	...	...	...	Nil
(c) Number of cases of overcrowding relieved during the year	...	...	...	...	...	Nil
(d) Number of houses again overcrowded after being previously relieved	...	...	...	...	...	Nil

5. Housing Act, 1949.

Number of applications for grants received	Nil
--------------------------------------------	-----	-----	-----	-----	-----

6. Movable Dwellings, Tents, Vans, etc.

Number of site licences	...	...	...	...	11
Number of individual licences	..	...	...	...	3
Number inspected during the year	...	...	...	...	159
Number of contraventions remedied	...	...	...	...	12

The number of house completions for the year was much below the post war average which I understand was due in some measure to the unfavourable weather during the winter and spring of the year. Undoubtedly, the most unusual completions were the Brownlow Bungalows which were ready for occupation in April of the year. These consisted of six single bedroom bungalows designed to provide comfortable and suitable homes for elderly residents with the £7,000 odd contributed by Councillor Brownlow which he raised as the result of his wonderful solo and nationally famous effort by collecting and selling junk for a public benefit

purpose. The Council sponsored the building of the bungalows and later arranged to take them over for administration and maintenance as Council property. The rental fixed was an inclusive charge of 10/- weekly.

The incidental repairs to dwelling-houses were carried out without need for enlisting statutory powers except in two instances where the Council completed the work in default. The Sanitary Inspector reported the completion of four major overhauls and 127 other minor attentions that were the subject of complaints.

During the peak seasonal period, 721 trailers and 275 tents were stationed in the district, housing some 4,000 people during the August Bank Holiday week. The control of these was helped by frequent visits to correct any irregularities. The question of improving the control of this form of holiday life was considered with the County Planning Authority which resulted in the density per acre being fixed at a standard rate intended to be implemented at a near future date.

SECTION E.

INSPECTION AND SUPERVISION OF FOOD.

There was no relaxation of effort to keep the hygienic standard in food production, the handling and sale conditions up to suitable levels. In the case of premises connected with the manufacture or make up of food, attention was directed to the general maintenance and cleanliness of buildings, the provision of impervious table covers and the adequate supply of hot water. It was the rule that all attendants wore washable overhauls. In cafe kitchens extra hot water geysers were installed and improvement in the method of washing up encouraged by the use of accepted forms of chemical sterilants. The covering of displayed foods was in the main well observed as was attention to keeping all foods protected from contamination by rodents, flies and dirt.

Below is given a brief account of the results of the supervision of particular premises connected with food.

Bakehouses.

Number in district	...	...	...	...	6
Number of inspections	...	...	...	...	26
Number of contraventions	...	...	...	...	3
Defects Remedied	...	...	...	...	3

Retail Shops.

There was little grounds for complaint here. The Sanitary Inspector reported 53 visits made for inspection of meat and to the premises; and 42 to other shops. All defects were remedied. The following list of meat and food was surrendered as unfit for human consumption.

Sausages	...	17 lbs.	Tinned Chicken	...	36 lbs.
Beef	...	216 lbs.	„ Sausages	...	43 „
Head and Tongue	1		„ Ham	...	239 „
			„ Vegetables	100	„
			„ Meat	...	10 „
			„ Fruit	...	291 „
			„ Milk	...	12 pints
					(approx.)

The Inspector considered the deterioration generally, especially in the case of the ham, was due to the inferior tinned plate material, most of which food was canned on the continent. Fish shops were regarded as satisfactory.

Cafes, Kitchens and Make Up Rooms.

These places were given the fullest measure of attention possible, so far as the call of other duties allowed, an account of their direct bearing on food poisoning risk. The Sanitary Inspector made 149 routine and special visits and was fully satisfied with the general standards obtaining, apart from the inevitable problems associated with kitchen space and temporary staff during the seasonal rush periods.

Milk.

The anxieties relating to milk are now thankfully reduced to a minimum since the district supply became wholly heat treated. The licences current at the end of the year were 12 retail shops selling sterilized milk and 5 suppliers—roundsmen and depots—licensed to sell T.T. Pasteurised, pasteurised and sterilized.

37 samples were examined at the P.H. Laboratory to check the efficiency of the pasteurisation process, all of which satisfied the tests.

Ice Cream.

There were 3 producer retailers, and 52 premises licensed for sale only, during the year.

The results of the samples taken where :—

Grades	1.	2.	3.	4.
Produced in Mablethorpe	23	3	1	1
Produced ex Mablethorpe	24	8	3	2
TOTALS	47	11	4	3

Perhaps the most regrettable thing about the two inferior local reports, coming from the same producer, was that they spoilt an otherwise fine record for both the particular firm and the local production in general. The Grade 4 result occurred at the end of

the season and decided the producer in question to suspend operations for a period. Only one out of the five outside firms supplying, caused anxiety by the poor general level of its results, which showed for the year :—Grade I 5, Grade II 2, Grade III 3, Grade IV 2. All the inferior samples from this firm occurred during August and were taken from 5 different retailers, but it is only fair to state that there were variations of grading in samples taken on the same day from retailers.

Five additional samples were submitted for Analysis of the oil and fat content which showed variations from 7.8 to 11.1%.

SECTION F.

PREVALENCE OF AND CONTROL OVER, INFECTIOUS AND OTHER DISEASES.

Infectious Diseases other than Tuberculosis notified during 1951:—

Disease		Total cases notified	Case Rate per 1000, of population	Deaths
Whooping Cough	...	38	7.22 (3.87)	1
Measles	...	11	2.09 (14.07)	Nil
Pneumonia	...	6	1.14 (0.99)	Nil
	Totals	55	—	1

The whooping cough cases occurred sporadically from the beginning of the year, but the bulk of the cases were notified during November, and by the end of the year the outbreak had practically subsided. It was unfortunate that a death resulted from the disease.

The measles cases were mild in character and never assumed epidemic proportions.

Four of the pneumonia notifications, two of them involving children, occurred during April.

Diphtheria Immunisation and Vaccination against Small Pox.

I am indebted to the County Medical Officer for supplying the following information about immunisations and vaccinations.

DIPHTHERIA IMMUNISATIONS :

Under 5 years	5-14 years	Booster doses
36	9	78

VACCINATIONS :

<i>Ages in years.</i>	0/1	1/4	5/14	15 and over	Total
Primary Vaccinations	4	7	Nil	3	14
Re-vaccinations	Nil	Nil	1	1	2

The number immunised in the under five group, which is the one that matters most, was less than the previous year by 16 and represented only half the births for that year. This district in the

early days of immunisation had an excellent record which regrettably has fallen in the past four years to a rather poor average for any urban district. Whether this decline—affecting the baby group—is due to apathy or the wishful thought of danger past, the parents of non-immunised children are risking an unfortunate awakening should diphtheria occur in the district, a danger which increases the more the non-immunes accumulate. The number of re-inforcing or boost doses given school entrance age children, immunised during infancy, showed no falling off.

Tuberculosis—New Cases and Mortality during 1951.

<i>Age Periods</i>	<i>New Cases</i>				<i>Deaths</i>			
	<i>Non-Respiratory</i>		<i>Respiratory</i>		<i>Non-Respiratory</i>		<i>Respiratory</i>	
	M.	F.	M.	F.	M.	F.	M.	F.
0 ...								
1 ...			1					
5 ...								
15 ...	3			1				
25 ...		1			1			
35 ...								
45 ...								
55 ...								
65+ ...								
TOTALS	3	1	1	1	—	1	—	—

APPENDIX.

WATER AND SEWERAGE ANALYSIS.

Report on Analysis of Waters.

Received 12th December, 1951, from Mablethorpe and Sutton Urban District Council.

Mark 1—Maltby Bore.

Mark 2—Sutton-on-Sea Bore.

These waters contain per million parts :—

			<i>Malty Bore</i>	<i>Sutton-on-Sea Bore</i>
Total Solids dried at 180°C.	...	...	450.00	710.00
Suspended Matter	...	...	absent	absent
Chlorides as chlorine	...	...	24.90	131.40
Oxidised Nitrogen as nitrate	...	...	absent	absent
Oxidised Nitrogen as nitrite	...	...	absent	absent
Free and saline Ammonia	...	...	0.883	0.392
Albuminoid Ammonia	...	...	0.004	0.004
Temporary Hardness	...	...	80.00	70.00
Permanent Hardness	...	...	0.00	0.00
Oxygen absorbed in 4 hrs. @ 80 °F. from N/80 KMnO ₄	...	...	0.00	0.00
pH value	...	...	8.40	8.70
Appearance	...	...	clear & bright	clear & bright
Odour	...	...	none	none
Taste and Colour	...	...	normal	normal
Heavy Metals	...	...	absent	absent
Free Chlorine	...	...	absent	absent
Sodium Carbonate equivalent to	...	...	275.60	341.00

Observations.

Both waters have undergone small changes in chemical composition by comparison with the analyses made in December 1951 respectively. Both waters could be regarded as of suitable chemical quality for human consumption, domestic use and dairy purposes provided that recent bacteriological examinations have proved the absence of harmful or potentially harmful bacteria.

W. W. TAYLOR, B.Sc., F.R.I.C.

Report on analysis of Sewage Effluents.

Received 12th December, 1951 from Mablethorpe and Sutton Urban District Council.

Mark 1—Sewage Effluent from Mablethorpe Sewage Disposal Works.

Mark 2—Sewage Effluent from Sutton-on-Sea Sewage Disposal Works.

These Effluents contain per 100,000 parts :—

		<i>Mablethorpe</i>	<i>Sutton-on-Sea</i>
Total Solids dried at 100 °C.	...	102.00	155.00
Suspended Matter	...	2.00	3.00
Chlorides as chlorine	...	22.72	48.30
Free and saline Ammonia	...	0.388	0.388
Albuminoid Ammonia	...	0.156	0.195
Nitrite Nitrogen	...	0.006	0.022
Nitrate Nitrogen	...	4.54	1.25
Oxygen absorbed from N/80 KMnO ₄			
in (a) 3 minutes	...	0.25	0.15
(b) 4 hours @ 80 °F.	...	0.86	0.89
pH value	...	7.30	7.30
5 days Biological Oxygen Demand at 65 °F.	...	1.90	2.00
5 days Incubation Test at 80 °F.	...	Stable	Stable

Observations.

At the time of sampling both effluents satisfied the accepted standards of chemical quality for sewage effluents and could be considered as suitable for free discharge into inland waters.

W. W. TAYLOR, B.Sc., F.R.I.C.

